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INFO RUCNCLS/ALL SOUTH AND CENTRAL ASIA COLLECTIVE  
RUEHNE/AMEMBASSY NEW DELHI 3842  
RHMCSUU/DEPT OF ENERGY WASHINGTON DC  
RUCPDC/NOAA WASHDC  
RUEHRC/DEPT OF AGRICULTURE WASHDC  
RUCPDO/DEPT OF COMMERCE WASHINGTON DC  
RUEAIIA/CIA WASHDC  
RUEKDIA/DIA WASHDC  
RHEHNSC/NSC WASHDC  
RHEHAAA/WHITE HOUSE WASHINGTON DC  
RUEHZN/ENVIRONMENT SCIENCE AND TECHNOLOGY COLLECTIVE

UNCLAS CHENNAI 000284

STATE FOR OES/PCI, OES/STC, OES/SAT, OES/EGC, AND SCA/INS  
STATE FOR STAS  
STATE PASS TO NSF FOR INTERNATIONAL PROGRAMS  
STATE FOR SCA, OES (STAS FEDOROFF); OES/PDAS/RHARNISH; OES/PCI  
STEWART; OES/IHB MURPHY; OES/GTHOMPSON  
STATE FOR EEB/DAVID HENRY  
PASS TO MAS/DAS/JESTRADA  
PASS TO MAC/DAS/HVINEYARD  
PASS TO NSF/MLUECK  
PASS TO NASA/OER (MCINTOSH/WILLIAMS/KAMM)  
SLUG TO DOE/DAS/JMIZROCH; DOE/MGINZBERG  
SLUG TO DOE/ (TCUTLER/GBISCONTI/CGILLESPIE)

SIPDIS

SENSITIVE

E.O. 12958: N/A

TAGS: [TSPA](#) [PREL](#) [EIND](#) [SENV](#) [IN](#)

SUBJECT: INDIA'S FIRST LUNAR ORBITER MISSION SUFFERS PREMATURE  
FAILURE

REF: A) NEW DELHI 2641, B) CHENNAI 356

1. (U) The Indian Space Research Organization (ISRO) experienced abrupt loss of radio contact with its Chandrayaan-1 (C-1) lunar orbiter at 0130 local on August 29. ISRO Director Madhavan Nair told the press later that day that ISRO had terminated the mission. The spacecraft had completed 312 days in orbit since its launch on October 22, 2008 (reftels), and was expected to serve for two years. Nair said that the mission had nonetheless completed 90 to 95 percent of its scientific objectives, which mainly involved a detailed mapping of the moon. He added that the craft had already sent some 70,000 images of the moon back to ISRO's command center near Bangalore and had collected data on the chemical and mineral content of the moon's soil. ISRO officials did not announce an official cause of the orbiter's failure, but a spokesperson speculated that the terminal failure was due to the loss of power supply to on-board computers that controlled the telemetry and telecommand communications with ground control, rendering the orbiter unable to communicate.

2. (SBU) C-1 experienced a series of glitches following its launch last year. As early as a month into the launch, various electronic sub-systems apparently experienced greater-than-expected stress due to radiation. This led to the failure of some equipment, requiring the craft to orbit the moon from a greater distance than previously planned. ISRO's engineers (with some assistance from NASA and its Jet Propulsion Laboratory, we've heard from some non-ISRO sources) were able to create workarounds for these problems, however, until the fatal failure on August 29. The launch and initial success of Chandrayaan-1 remains a source of pride for India, and its loss is a significant disappointment. Planning for a Chandrayaan-2 mission, which will involve landing a rover on the moon, is already well under way and slated for a launch in 2012 or 2013. ISRO will hope

to use the lessons of C-1 to improve its capabilities for C-2.

Comment

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13. (SBU) One slightly troubling aspect of the C-1 experience is that ISRO did not disclose publicly any problems until May 2009, nearly six months after the initial failures of some systems. The organization's leaders, whose conversations with outsiders consistently stress its "indigenous" capabilities, tend to play down the amount of assistance the C-1 mission has received from other space agencies. The reality is that the involvement of agencies like NASA was critical for the success of the mission, but there has been little if any public acknowledgement of the contributions of any agency other than ISRO. One hopes that as ISRO becomes more confident of its own impressive (and very cost-effective) capabilities, it will be more willing to publicize its cooperation with other organizations.

SIMKIN